

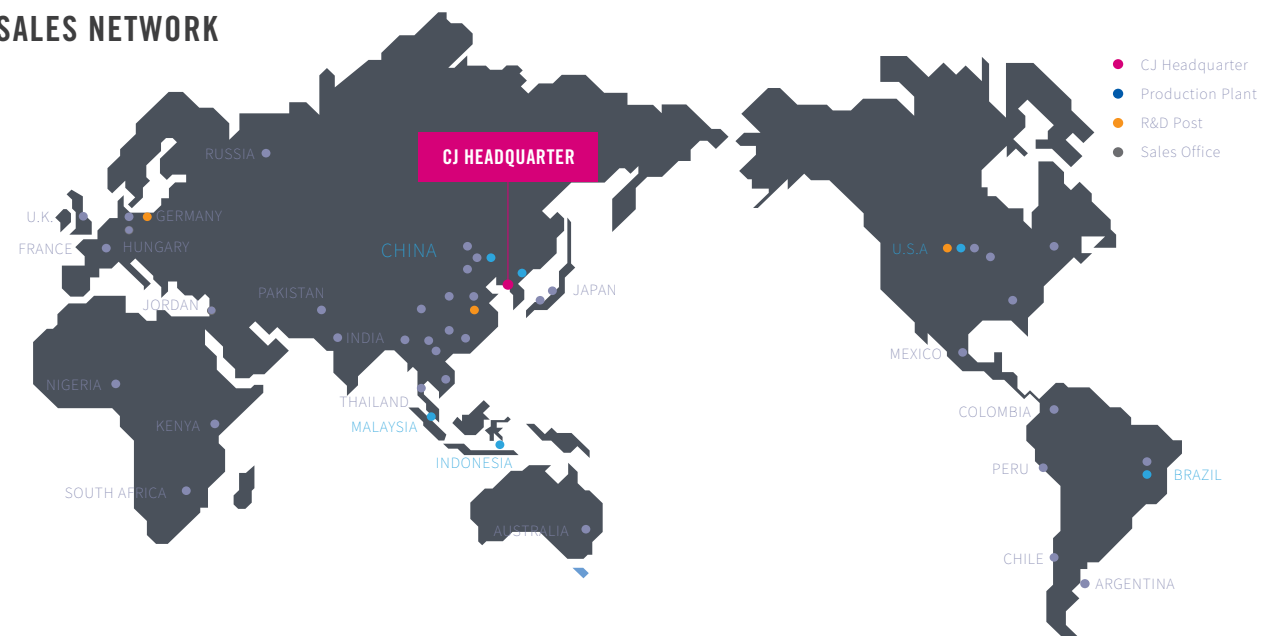
## PRODUCT INFORMATION

Production process	Produced by fermentation with <i>Corynebacterium glutamicum</i>
Product appearance	Light yellow crystalline powder
Packaging	25kg bags / 500 kg big bags
Nutritional values	100 % digestibility ME poultry 22.0 MJ/kg ME pigs 22.9 MJ/kg NE pigs 17.7 MJ/kg

## COMMERCIAL GUARANTEE

L-Valine, %	Minimum	96.5%
Moisture, %	Maximum	1.5%
Purity, %	Minimum	98%

## SALES NETWORK



Headquarters	Korea	Seoul	+82-2-3740-3434
Europe	Germany	Frankfurt	+49-6196-5901-15
North America	USA	Chicago	+1-530-241-0112
	Mexico	Guadalajara	+52-1-33-1848-5709
South America	Brazil	Sao Paulo	+55-11-3717-8704
Asia	China	Beijing	+86-10-5639-6256
	China	Shanghai	+86-21-5208-0293
	Taiwan	Taipei	+886-02-2736-7042
	Thailand	Bangkok	+66-2-611-2571
	Vietnam	Ho Chi Minh	+84-8-3827-2308
	India	Mumbai	+91-22-2757-7902/5
	Indonesia	Jakarta	+62-21-5299-5051
	Philippines	Manila	+63-2-638-7937
	Malaysia	Kuala Lumpur	+60-3-7832-0687

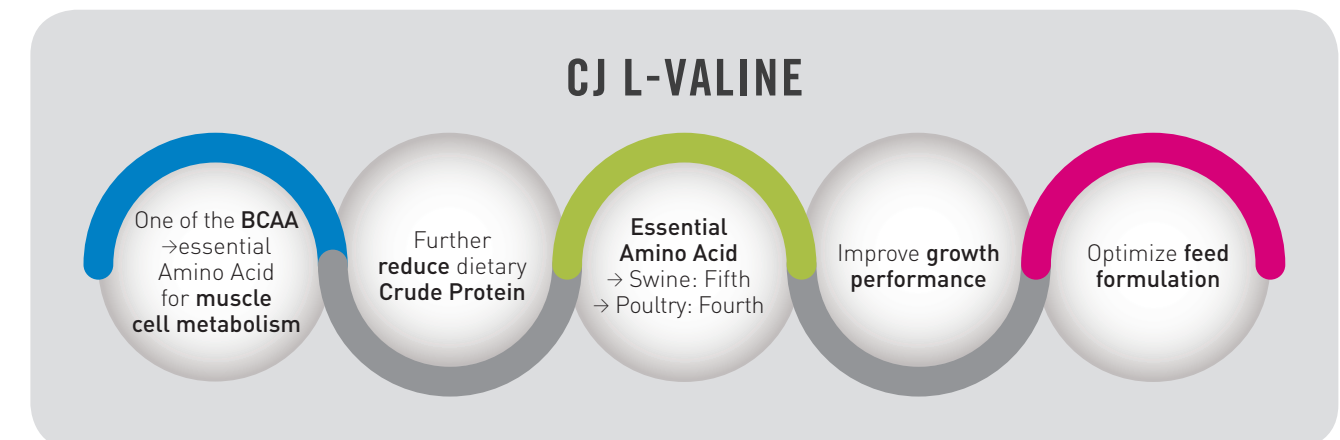


BALANCING YOUR DIET  
FOR BETTER PERFORMANCE

# L-VALINE

- ◆ L-Valine(Val) is an indispensable amino acid which can be considered the fourth or fifth limiting amino acid in most diets for monogastric livestock.
- ◆ CJ L-Valine is a high-quality product which is produced by fermentation with a recognized safe microorganism and designed to meet the digestible valine requirements of high-yielding livestock genetics.

## MAIN BENEFITS



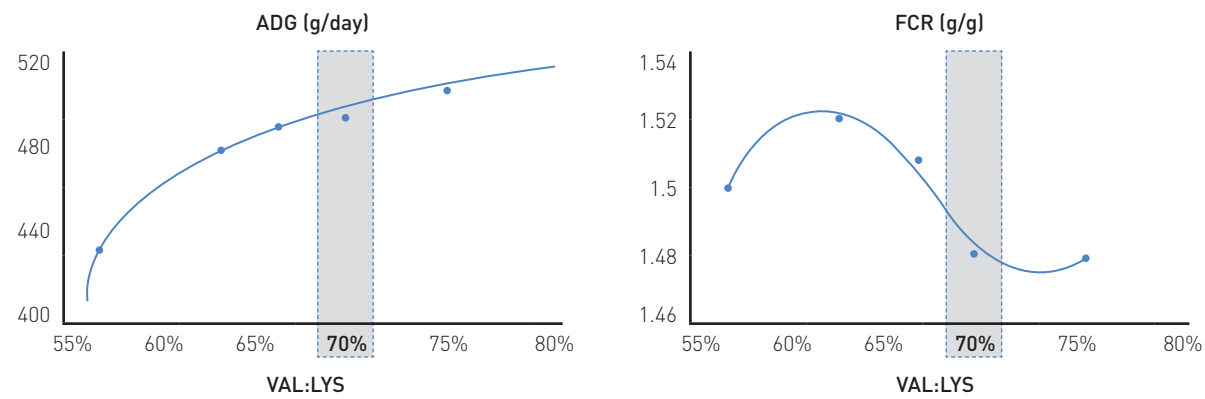
## L-VALINE FOR SWINE

### PIGLET

- ◆ Recommendation : over **70%** of Val:Lys ratio
- ◆ Advanced growth performance → **Weight gain ↑ & FCR ↓**
- ◆ Lowering CP level → Diarrhea incidents ↓ & Energy efficiency ↑

#### ○ Ideal Val:Lys ratio for piglet

[IRTA, Spain, 2013]

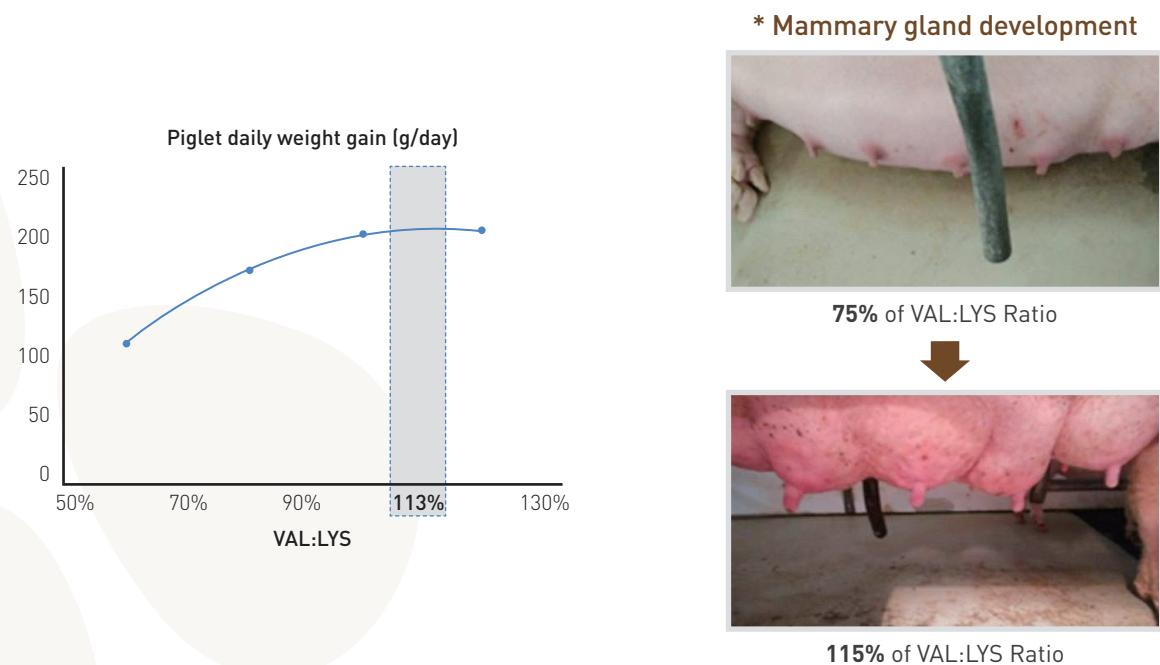


### SOW

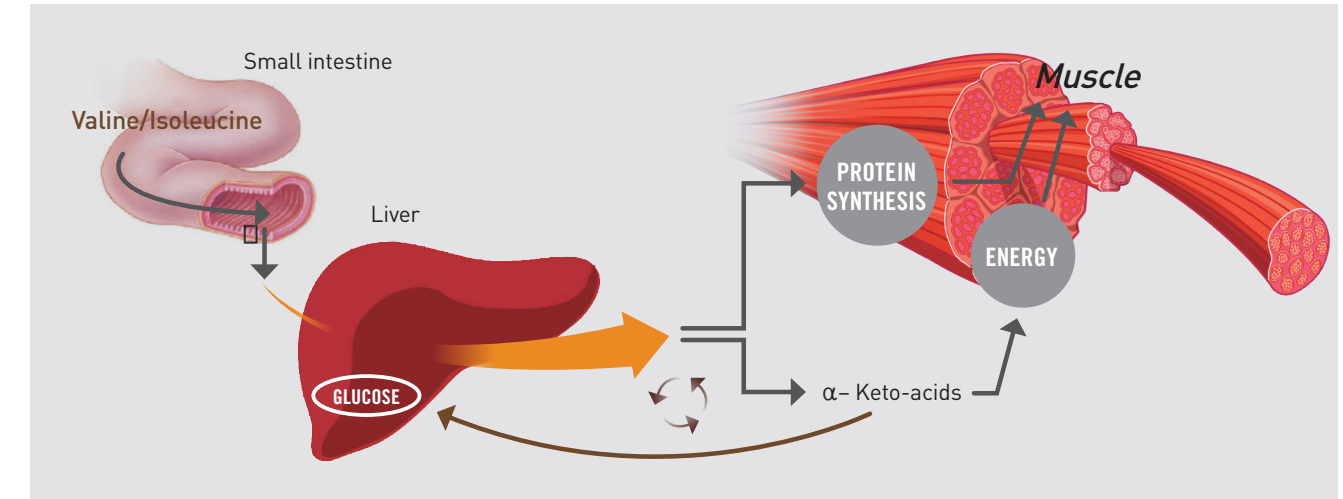
- ◆ Recommendation : **113%** of Val:Lys ratio
- ◆ Strengthening nursing ability  
→ **Mammary gland development\*** & Colostrum quality ↑ & Piglet growth ↑
- ◆ Backfat loss ↓ → Shortening WEI (Weaning to Estrus Interval) & Life extension

#### ○ Ideal Val:Lys ratio for sow

[CAU-Beijing, China, 2015]



## HOW L-VALINE IS USED IN THE BODY?



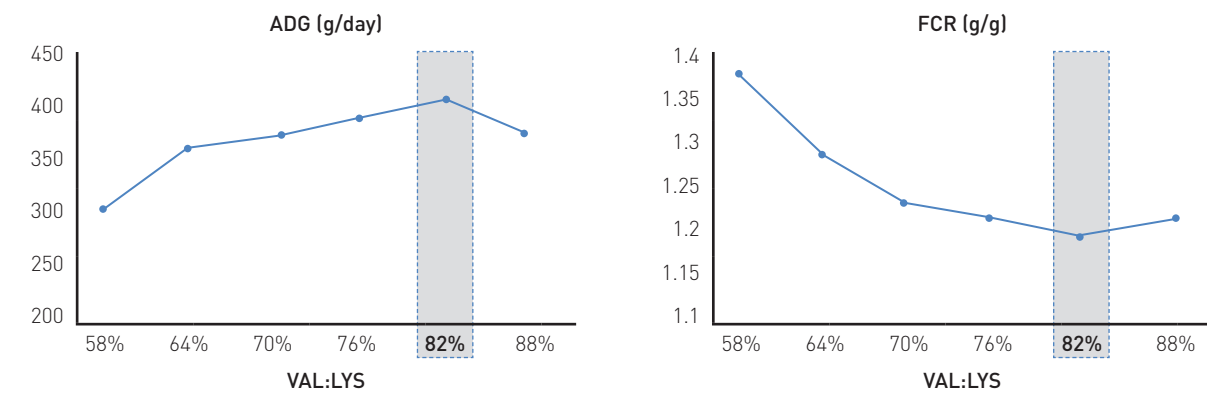
## L-VALINE FOR BROILER

- ◆ Recommendation : **80%** of Val:Lys ratio
- ◆ Better growth performance (ADG, FCR improvement)
- ◆ Body protein proteolysis ↓ & synthesis ↑

#### ○ Ideal Val:Lys ratio for starter

[Mississippi State University, US, 2008]

Ideal Val:Lys ratio for starter is **82%**.



#### ○ Ideal Val:Lys ratio for grower

[Mississippi State University, US, 2008]

Ideal Val:Lys ratio for grower is **77%**.

